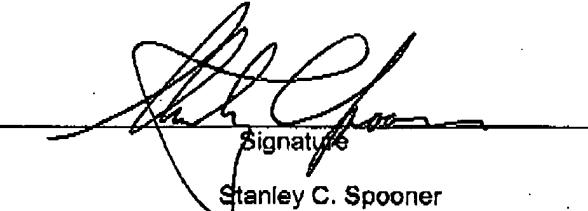


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PTO/SB/33 (07-05)

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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) |
|---|----------------------------------|--------------------------|
| | Application Number 10/529,055 | Filed March 24, 2005 |
| | First Named Inventor HARRIS | |
| | Art Unit 3662 | Examiner T. Brainard |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> Applicant/Inventor</p> <p><input type="checkbox"/> Assignee of record of the entire interest. See 37 C.F.R. § 3.71. Statement under 37 C.F.R. § 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> Attorney or agent of record <u>27,393</u> (Reg. No.)</p> <p><input type="checkbox"/> Attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 C.F.R. § 1.34 _____</p> <p>*Total of <u>1</u> form/s are submitted.</p> | | |
|  Stanley C. Spooner <hr/> <p>Typed or printed name</p> <p><u>703-816-4028</u></p> <p>Requester's telephone number</p> <p><u>December 22, 2008</u></p> <p>Date</p> | | |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.*

*Total of 1 form/s are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and selection option 2.

Adjustment date: 12/22/2008 HMARZI1
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**STATEMENT OF ARGUMENTS IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW**

The following listing of clear errors in the Examiner's rejection and his failure to identify essential elements necessary for a *prima facie* basis of rejection is responsive to the fourth and non-final Official Action mailed August 22, 2008.

Error #1. The Examiner again appears to ignore the requirements that each independent claim is a "bistatic" laser radar device

Where the preamble of a claim is, "necessary to give life, meaning and vitality" to the claim, then the claim preamble should be construed as if in the balance of the claim." MPEP §2111.02 quoting *Pitney Bowes v. Hewlett-Packard Co.*, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999).

The preamble of each of Applicants' independent claims 1, 18 and 21 defines the claimed device as being a "bistatic" laser radar device. On page 1, line 3 of the present specification, the Examiner is taught that a "laser radar" is also known as a LIDAR (Light Detection And Ranging). It is specifically noted that, in order to be a laser radar device, a structure must have a coherent laser radar to as to enable the transmit beam to be accurately timed with respect to the receive beam to permit distance measurement and/or any Doppler shift in the frequency of the returned signal (page 1, lines 6-16).

On page 2, lines 1 to 4, the difference between monostatic lidar systems and bistatic lidar systems is discussed (the monostatic lidar has common transmit/receive optics and the bistatic lidar has separate transmit and receive optics). Also, on page 2, lines 18-24, bistatic lidar systems are discussed as having "non-parallel transmit and receive beams [that] can be arranged to intersect at a certain point thereby accurately defining a probe volume" but the transmit and

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receive beams must still be coherent in order to provide the desired Doppler shift measure of a LIDAR.

Therefore, a bistatic laser radar (LIDAR) device is a well-known class of devices to which Applicants' improvements relate.

Error #2. The Examiner fails to demonstrate that the cited prior art teaches a "bistatic laser radar device"

Like the previously cited prior art, neither of the Schneiter references (U.S. Patent 4,963,017 or U.S. Patent 5,082,362) contain any disclosure of a laser radar device or LIDAR device. In fact, Schniter teaches only "triangulation" and distinguishes itself from an LIDAR techniques. Schniter states:

"Active echoing techniques, such as RADAR, SONAR and LIDAR employ emitted electromagnetic, acoustic and light energy, and monitor the reflected energy from the target surface. These techniques use a time-of-flight measurement as a basis for determining range and are typically expensive and complex.

In machine vision research and application, a different active technique called structured illumination has been employed . . . This structured illumination technique is called triangulation." (Schneiter '362 at column 1, lines 28-37 and similar language in Schneiter '017 at column 1, lines 14-20).

Importantly, neither Schniter reference requires any coherency between its transmit beam and its receive beam in order to determine the "time-of-flight" (to determine distance) and/or the Doppler shift (to determine speed of the target). The lack of coherency in the Schniter references confirms the lack of any laser radar (LIDAR) teaching.

Accordingly, because all claimed structures and claimed structural interrelationships are not shown in either Schniter reference, there can be no basis for rejection of claims 1, 18 or 21 (or claims dependent thereon) under 35 USC §102, and the rejection is traversed.

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Error #3. The Examiner fails to demonstrate that the cited prior art teaches a "variable focus transmit beam"

Each of independent claims 1, 18 and 21 recites "a receive channel for forming a variable focus receive beam." The Examiner alleges in the outstanding Official Action that Schneiter '362 (the Examiner in the Final Rejection reverses his position from the previous official action changing from the Schniter '017 reference to the Schniter '362 reference) teaches the claimed "receive channel for forming a variable focus beam" (fig 15a and col. 9, line 48 to col. 10, line 7). However, no LIDAR beams, transmit or receive are suggested in either Schniter reference.

Further, while the cited section of Schniter in the official action states that the lens 158 could be fixed, it does not specifically indicate that the lens is moveable to achieve a variable receive focus of a coherent LIDAR beam as required by the independent claims. Without the claimed elements being disclosed there is no basis for rejection under 35 USC §102 or 103 and any further rejection is traversed.

Error #4. No prior art reference teaches the claimed interrelationship that "all points of focus of the transmit beam and all points of focus of the receive beam fall on a common axis within the operable distance range of the device"

All of applicants' independent claims require that the points of focus of both the transmit and receive beams fall "on a common axis." Again, these transmit and receive beams are coherent laser beams which are part of a LIDAR. Not only do both Schniter references fail to contain any disclosure of these beams, they have no disclosure of the claimed interrelationship of elements, and both Schniter references actually teach a triangulation of constant laser optical beams (which are incoherent) in order to achieve its triangulation measurement.

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Error #5. The Examiner fails to allege that any other prior art reference teaches the claim elements and/or interrelationships which are missing from the Schniter patents and thus no combination of cited art can establishes a prima facie case of obviousness

In the multiple obviousness rejections, the Examiner relies solely upon the Schniter '362 reference to teach the claimed bistatic laser radar device and fails to allege that any other prior art reference (Bowers, Carlson, Tocker, Holton & Evans) teaches any aspect of a LIDAR device. It is assumed that the Examiner intended to reference Schniter '362 in the rejection of claim 21 even though which Schniter reference was intended was not specified.

Accordingly, any combination of the cited prior art references would fail to disclose any claimed component of a LIDAR device, let alone one having variable focus transmit and receive channels in which all points of focus of the transmit and receive beams "fall on a common axis within the operable distance range of the device." Therefore, even if it would have been obvious to pick and choose features from the cited references and then to combine them in the manner suggested only by Applicants' independent claims 1, 18 and 21, the *prima facie* case of obviousness has not been made by the Examiner. Moreover, there is no explicit "analysis" as required by the US Supreme Court in the KSR case which demonstrates any rationale for combining references. As the "analysis" is required in order to establish a *prima facie* case of obviousness, the current rejections fall short of shifting the burden of proof to the Applicant.

Error #6. The Examiner fails to appreciate that both Schniter patents would lead one of ordinary skill in the art away from Applicants' combination claims

As noted above, both Schniter references distinguish themselves from any LIDAR device and clearly suggest the disadvantage of such systems as being "typically expensive and complex." As a result, the Schniter references would clearly lead those of ordinary skill in the

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art towards the cheaper and simpler "triangulation" technique for machine vision systems disclosed therein and away from the complex and expensive LIDAR in general, let alone the claimed "bistatic" laser radar with the claimed variable focus transmit and receive beams which have all points of focus falling on a common axis. Therefore, any *prima facie* case of obviousness made is rebutted by the references teaching away from the claimed combination.

SUMMARY

Neither Schniter reference (nor other secondary reference) teaches coherence between transmit and receive beans - required by definition for a "laser radar device." There is no disclosure of variable focus transmit and receive beams which are coherent. There is no disclosure of transmit and receive beams with both points of focus falling on a "common axis." Even if combined, the various portions of the prior art would not form a LIDAR device as claimed, and, in fact, the primary reference clearly teaches away from any LIDAR device.

As a result of the above, there is simply no support for the rejection of Applicants' independent claims 1, 18 and 21 or claims dependent thereon under 35 USC §103. Applicants respectfully request that the Pre-Appeal Panel find that the application is allowed on the existing claims and prosecution on the merits should be closed.